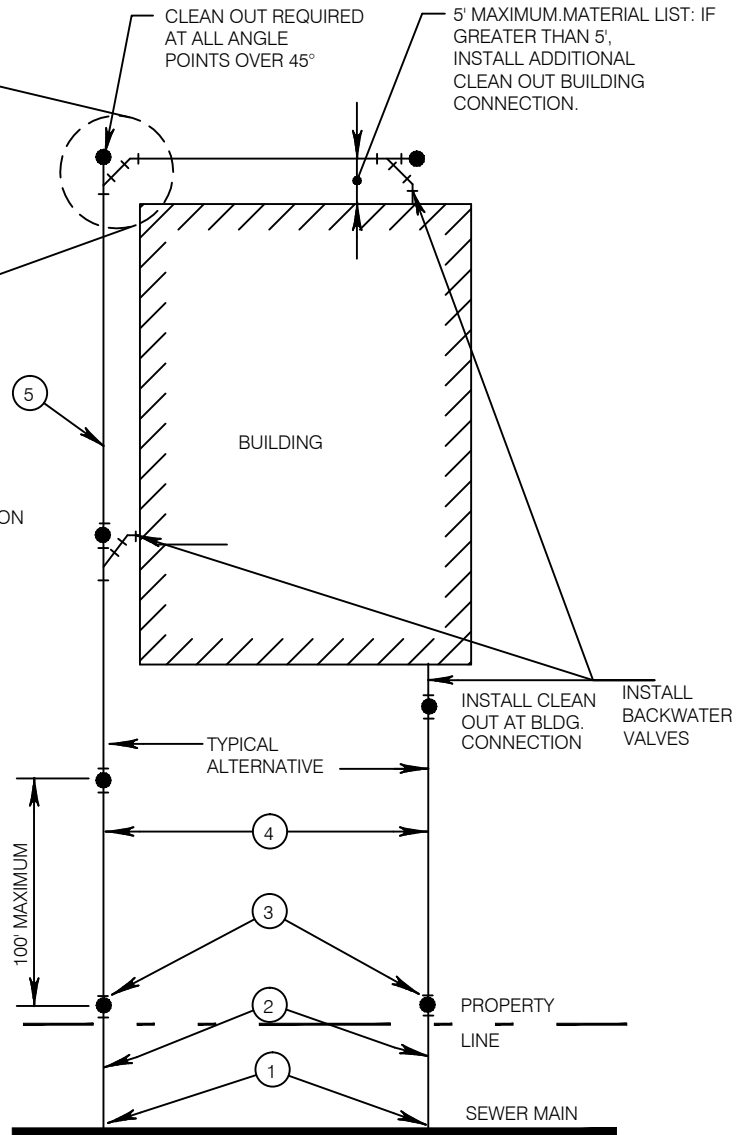


NOTES:

1. SEE SECTION 6 OF THE BOTHELL DESIGN AND CONSTRUCTION STANDARDS AND SPECIAL PROVISIONS FOR DETAILS AND REQUIREMENTS ON LATERALS.
2. ALL CLEAN OUT ON PRIVATE PROPERTY ARE TO BE ADJUSTED TO GRADE PER STD DWG 606.
3. CLEAN OUT ARE TO BE CONSTRUCTED WITH WYES OR SANITARY "T"'S (SWEEPS). STRAIGHT "T" IS NOT PERMITTED.
4. ALLOWABLE SLOPES ARE 2% (1/4" PER FT.) MINIMUM TO 100% MAXIMUM.
5. SEWER MUST BE STRAIGHT BETWEEN ANGLE POINTS. CHANGES IN LINE OR GRADE SHALL BE MADE WITH APPROVED FITTINGS.
6. TRACER TAPE SHALL BE INSTALLED OVER SIDE SEWER. THE TRACER TAPE SHALL BE PLACED APPROXIMATELY 1 FOOT ABOVE THE TOP OF PIPE AND IT SHALL EXTEND ITS FULL LENGTH. TRACER TAPE SHALL BE LINEGUARD TYPE II DETECTABLE, 6" IN WIDTH AND MARKED "SEWER".
7. BACKFLOW PREVENTION MAY BE REQUIRED AS PER DIRECTOR.



DETAIL NOTES:

- 1 CONNECTION TO SEWER MAIN PER SEC. 6 OF BOTHELL DESIGN AND CONSTRUCTION STANDARDS AND SPECIAL PROVISIONS AND STD DWG 602.
- 2 INSTALL 6" MINIMUM PIPE SIZE IN R.O.W.
- 3 INSTALL 6" CLEANOUT PER STD DETAIL 606.
- 4 PRIVATE SIDE SEWER
4" MINIMUM FOR SINGLE FAMILY
6" MINIMUM FOR ALL OTHER USES.
- 5 PVC PIPE SHALL CONFORM TO TEE REQUIREMENTS OF ASTM D-3034 SDR-35.

TYPICALLY ONLY ONE (1) CONNECTION FOR SIDE SEWER PER BUILDING IS ALLOWED. THIS DETAIL SHOWS TWO DIFFERENT LAYOUTS FOR CLARITY.



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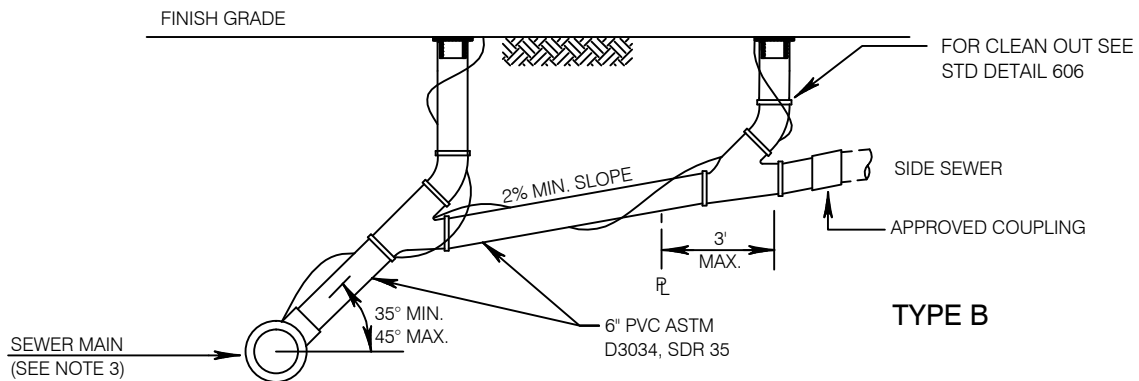
City Engineer

**SIDE SEWER
LAYOUTS**

Standard
Detail

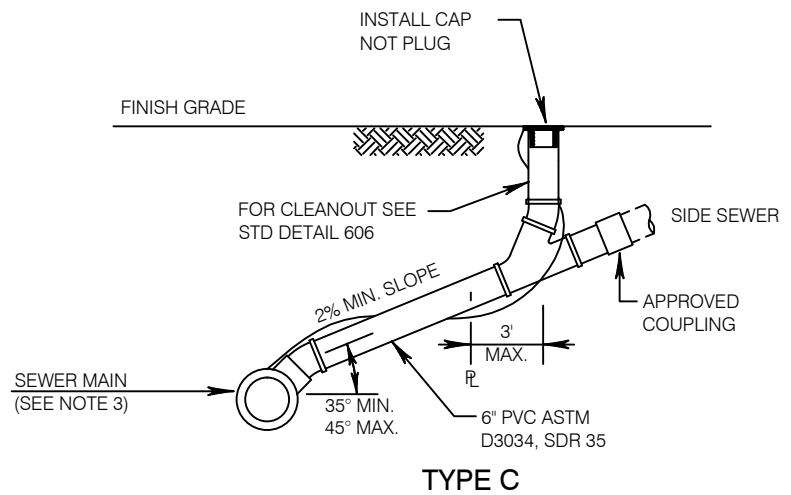
601

Revision Date
Feb, 2012



NOTES:

1. SIDE SEWER CONNECTIONS TO NEW MAINS SHALL BE FACTORY TEES.
2. CONNECTIONS TO SEWER MAINS SHALL BE MADE PER STD DETAILS 666 AND 667 OR BY APPROVED MANUFACTURED CONCRETE TEE.
3. #10 SOLID CORE TRACER WIRE TWO WRAPS MINIMUM REQUIRED FOR MAGNETIC LOCATION.
4. IF AN AUTOMATIC FLUSHING UNIT IS BEING ADDED REFER TO DETAIL 554.



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City Engineer

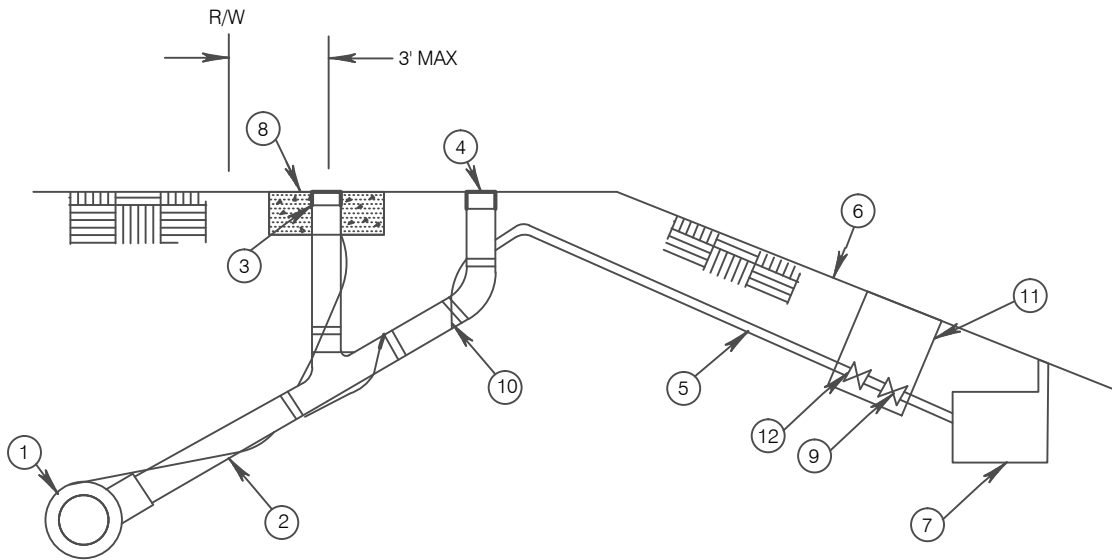
SIDE SEWER
CONNECTIONS

Standard
Detail

602

Revision Date
Nov, 2013

TYPICAL FORCE MAIN INSTALLATION



DETAIL NOTES:

- ① 8" SEWER MAIN IN THE STREET
- ② 6" SIDE SEWER
- ③ 6" CLEANOUT AT PROPERTY LINE. SEE STD DETAIL 606 "SEWER CLEANOUT"
- ④ 6" CLEANOUT AT JUNCTION OF GRAVITY AND FORCE MAIN. SEE STD DETAIL 606. THE 2" FORCEMAIN SHALL ENTER THE 6" VERTICAL PIPE THROUGH A 6" X 6" X 2" WYE
- ⑤ 2" FORCE MAIN. INSTALL WITH A MINIMUM OF 24" OF COVER, SEE STD DETAIL 605, NOTE 9
- ⑥ EXISTING GRADE
- ⑦ PUMP AND WET WELL/SEPTIC TANK, SEE STD DETAIL 604
- ⑧ 30" L X 30" W X 12" D CONCRETE PAD
- ⑨ BACK WATER VALVE
- ⑩ #10 SOLID CORE TRACER WIRE (2) WRAPES MINIMUM REQUIRED FOR MAGNETIC LOCATION
- ⑪ WEATHER TIGHT UTILITY BOX
- ⑫ BRASS BALL VALVE OR BRASS GATE VALVE (BRASS BALL VALVE PREFERRED)

NOTE:

SEE STD DETAIL 605 FOR GENERAL NOTES.



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[Signature]
City Engineer

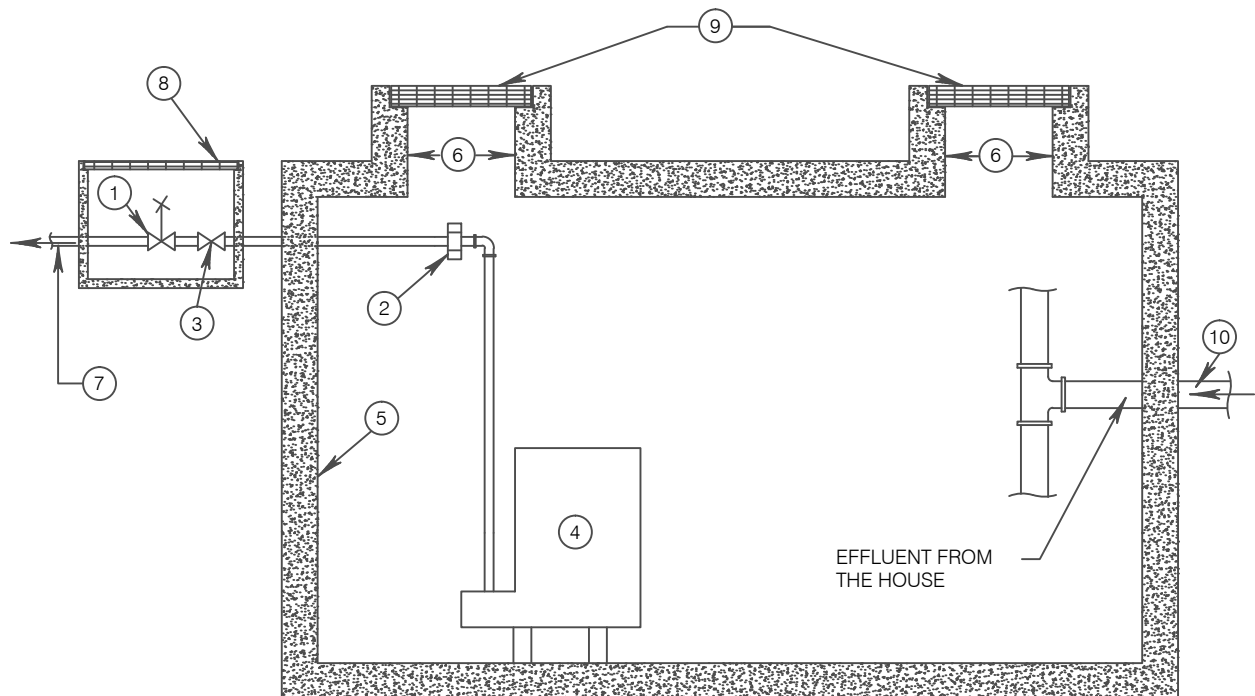
**SEWER PUMP SYSTEM
PRIVATE**

Standard
Detail

603

Revision Date
Jun, 2015

DETAIL OF PUMP INSTALLATION IN AN EXISTING SEPTIC TANK



DETAIL NOTES:

- ① BRASS BALL VALVE OR BRASS GATE VALVE (BRASS BALL VALVE PREFERRED)
- ② THREADED UNION
- ③ BACK WATER VALVE
- ④ SUBMERSIBLE EJECTOR SEWAGE PUMP
- ⑤ STORAGE TANK
- ⑥ ACCESS OPENING
- ⑦ 2" FORCE MAIN CONNECTS TO SIDE SEWER LATERAL.
- ⑧ WEATHER TIGHT UTILITY BOX.
- ⑨ ACCESS LID AT GRADE. SEE STD DWG 645 FOR RECOMMENDED FRAME AND LID.
- ⑩ THE PUMP VAULT SHALL BE VENTED PER THE STATE PLUMBING CODE

NOTE:

SEE STD DETAIL 605 FOR GENERAL NOTES.



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City Engineer

**PUMP SYSTEM
PUMP AND WET WELL**

Standard
Detail

604

Revision Date
Jun, 2015

PRIVATE SEWAGE PUMP SYSTEMS

MINIMUM REQUIREMENTS:


1. ONLY PLUMBING UNITS UNABLE TO BE SERVICED BY GRAVITY FLOW SHALL BE ROUTED TO THE PUMP SYSTEM.
2. PLANS FOR SYSTEM SHALL BE SUBMITTED FOR APPROVAL BEFORE CONSTRUCTION, INCLUDING PUMP SPECIFICATION.
3. CONTROL SYSTEM SHALL INCLUDE A HIGH WET WELL ALARM.
4. PUMP SHALL BE A 2" SUBMERSIBLE SEWAGE EJECTOR PUMP.
5. THE PUMP VAULT SHALL BE VENTED ACCORDING TO THE STATE PLUMBING CODE.
6. THE PUMP VAULT REVERSE CAPACITY SHALL BE MINIMUM OF 300 GALLONS ABOVE HIGH WET WELL ALARM.
7. A SEPTIC TANK MAY BE APPROVED FOR USE AS THE PUMP VAULT PROVIDED:
 - A) THE PUMP SHALL BE PLACED DIRECTLY ON THE BOTTOM OF THE TANK.
 - B) THE "OFF " SETTING SHALL BE ADJUSTED AS LOW AS POSSIBLE (APPROXIMATELY 6" FROM BOTTOM OF TANK).
 - C) THE "ON" SETTING SHALL BE WITHIN 8" OF THE "OFF" SETTING.
 - D) THE TANK MUST BE STRUCTURALLY SOUND AND WITHOUT LEAKS OR CRACKS.
 - E) THE DIVIDER WALL SHALL BE REMOVED FROM THE SEPTIC TANK.
8. THE DISCHARGE LINE SHALL INCLUDE A BRASS BALL VALVE OR BRASS GATE VALVE (BRASS BALL VALVE PREFERRED), A BACK WATER VALVE, AND A THREADED UNION UPSTREAM FROM THE BACK WATER VALVE. THE GATE VALVE AND UNION MUST BE ACCESSIBLE WITHOUT ENTERING THE VAULT. NEITHER THE VALVE NOR UNION SHALL OBSTRUCT THE ACCESS OPENING.
9. THE DISCHARGE LINE SHALL BE A MINIMUM OF 2" DIAMETER SCHEDULE 40 PVC PIPE.
10. DISCHARGE TO GRAVITY SYSTEM WILL BE AT A SURFACE CLEANOUT WITH A WYE CONNECTION.



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Approved By:

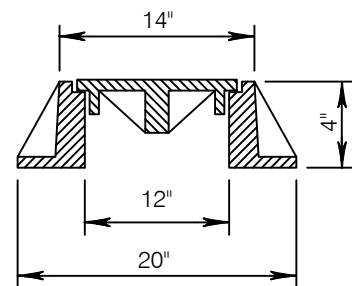
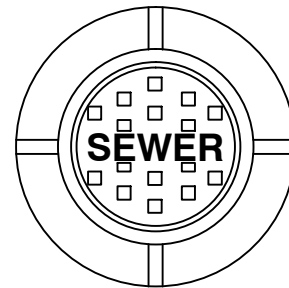
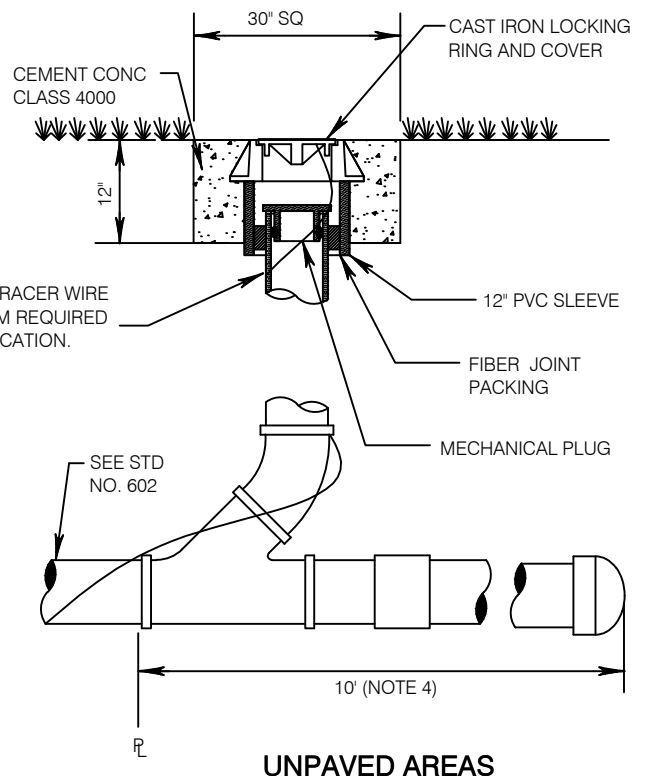
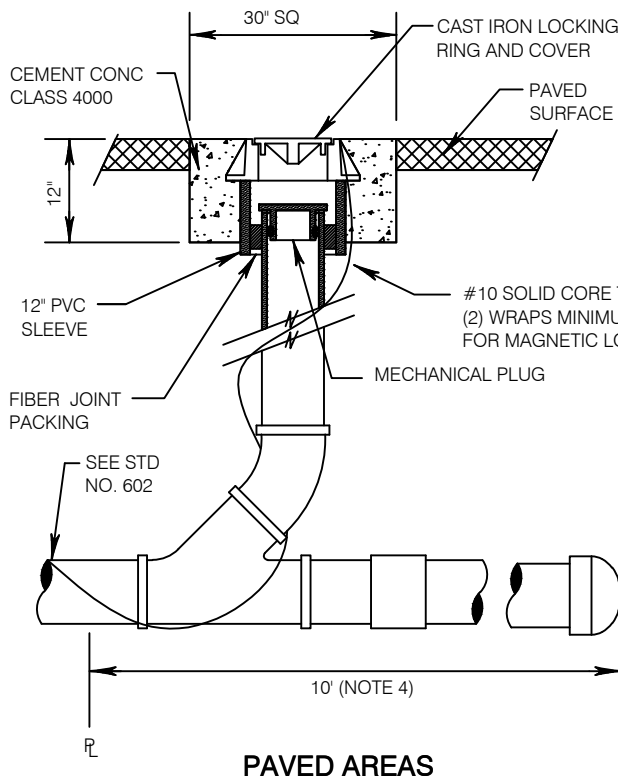

City Engineer

PUMP SYSTEM NOTES

Standard
Detail

605

Revision Date
Jun, 2015



12" CASTING FORCE
LOCKING
RING AND COVER

NOTE:

1. CLEANOUT PIPE AND FITTINGS SHALL BE PVC.
2. A SANITARY TEE OR SWEEP MAY BE INSTALLED IN LIEU OF A WYE AS SHOWN. STRAIGHT TEES ARE NOT ACCEPTABLE.
3. FOR NEW PLATS THE VERTICAL RISER PORTION OF THE CLEANOUT WILL BE CONSTRUCTED AT TIME OF CONNECTION TO BUILDING TO MINIMIZE DAMAGE, THE 6" WYE AND 6' PVC PIPE WITH MECHANICAL PLUG WILL BE INSTALLED PRIOR TO BUILDING CONNECTION.
4. SEWER STUB WILL BE EXTENDED 10' BEYOND PROPERTY LINE TO PREVENT DAMAGE TO CLEANOUT AND MINIMIZE CONFLICTS WITH OTHER UTILITIES WHEN SERVICE TO BUILDING IS ACCOMPLISHED.



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Approved By:

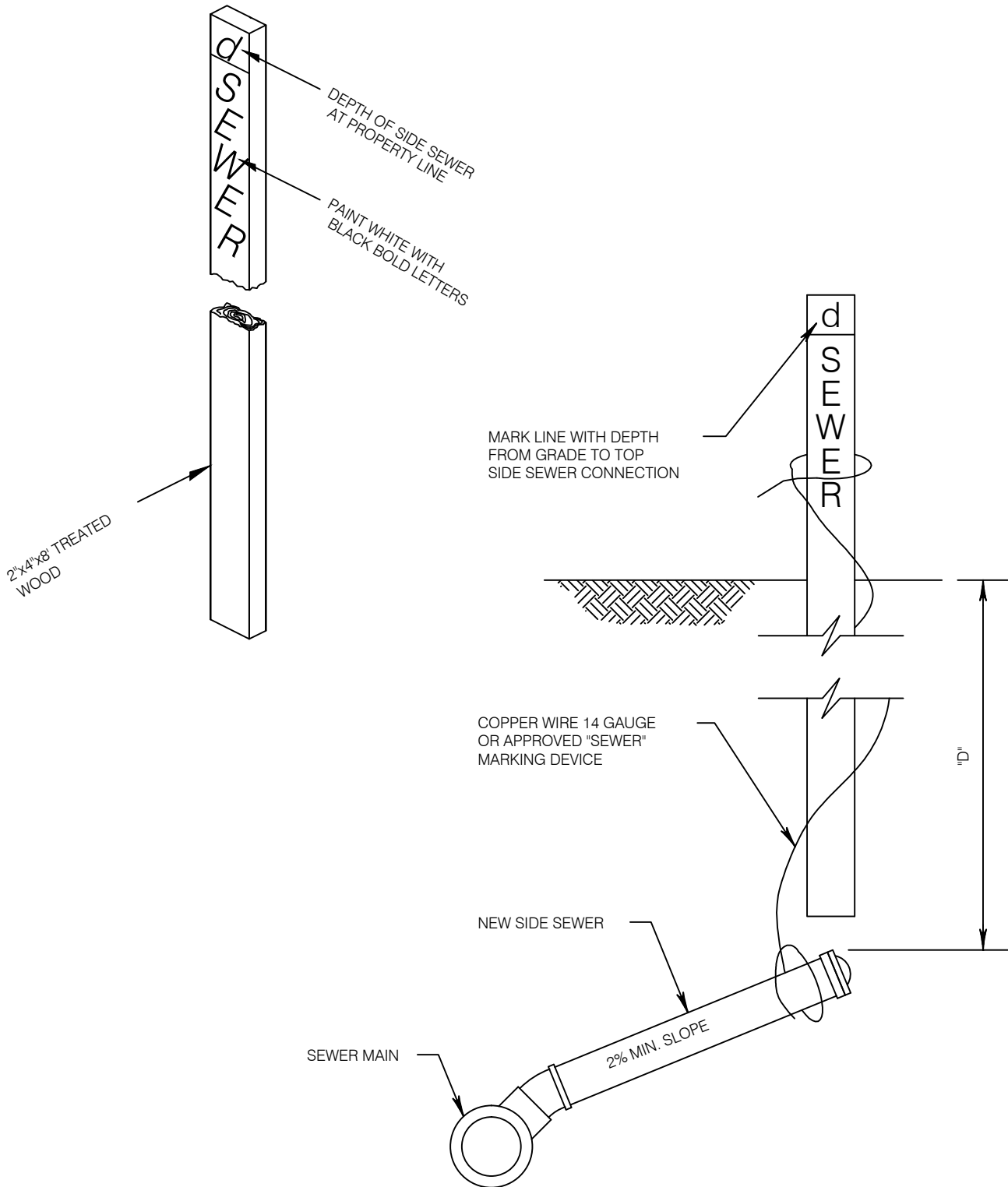
City Engineer

SEWER CLEANOUT

Standard
Detail

606

Revision Date
Nov, 2013



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PUBLIC WORKS DEPARTMENT

Approved By:

[Signature]
City Engineer

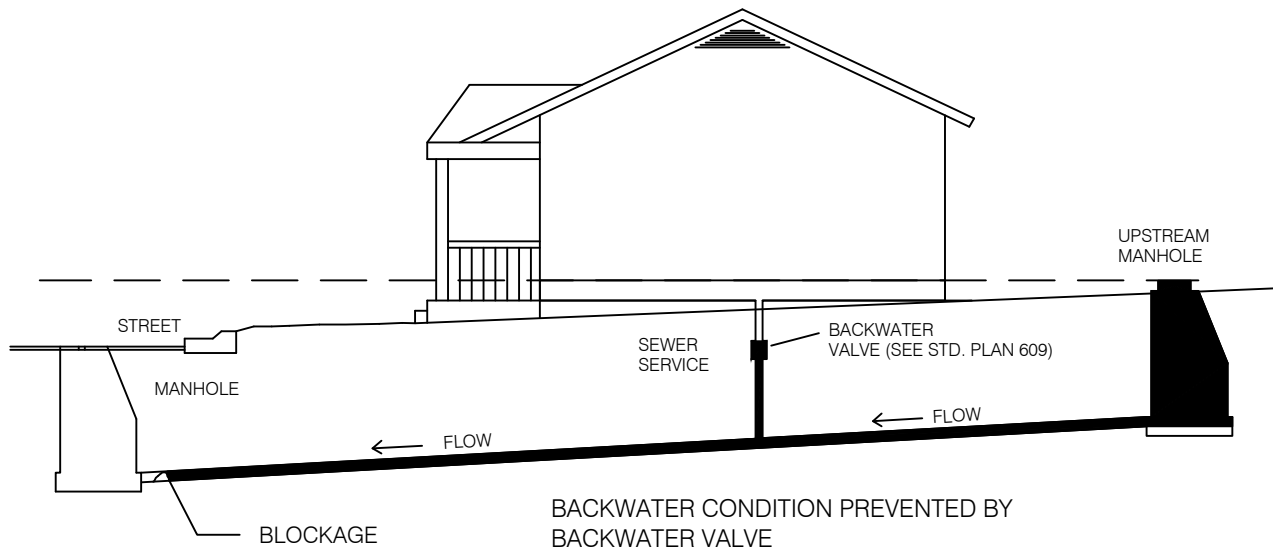
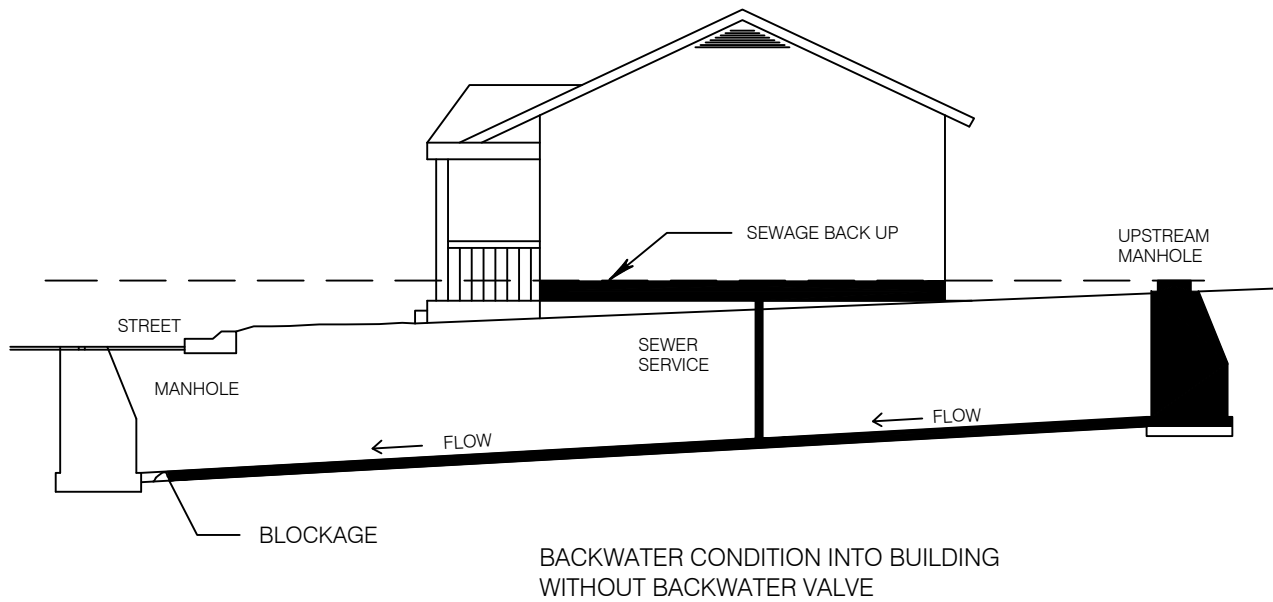
**SIDE SEWER
MARKER POST**

Standard
Detail

607

Revision Date
Feb, 2012

**BUILDING WITH NEXT UPSTREAM MANHOLE HIGHER THAN
THE LOWEST DRAIN AND BLOCKAGE IN SEWER MAIN**



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City of Bothell
PUBLIC WORKS DEPARTMENT

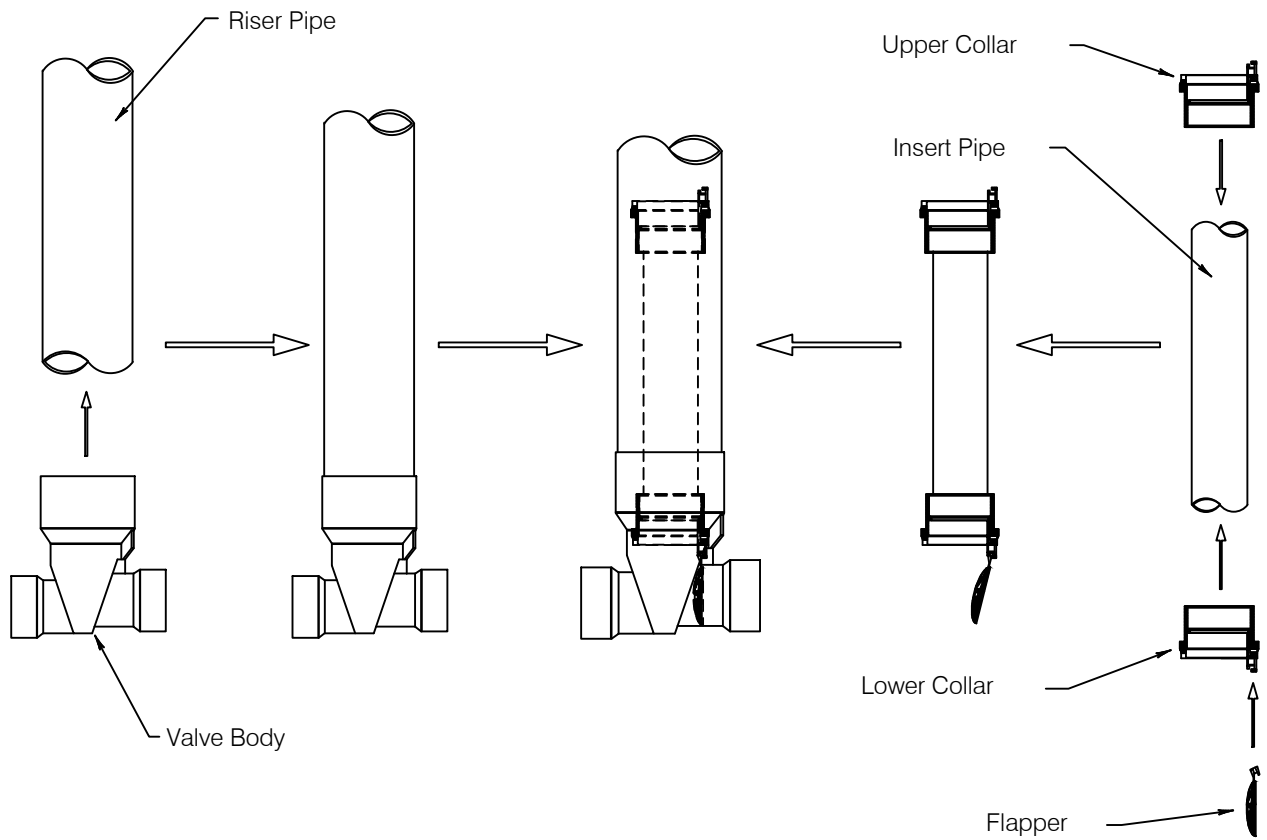
Approved By:
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City Engineer

**TYPICAL SEWER
SERVICE REQUIRING
BACKWATER VALVE**

Standard
Detail

608

Revision Date
Feb, 2012



NOTES:

1. RECTORSEAL BACKWATER VALVE OR APPROVED EQUAL.
2. VALVES MUST BE INSTALLED IN A LOCATION AT WHICH THEY CAN BE CLEANED AND SERVICED REGULARLY.
3. RISER PIPE AND INSERT PIPE FIELD CUT TO LENGTH.
4. BACKWATER VALVE ACCESS SHALL BE AT THE FINISHED GRADE PER STD. DETAIL NO 606.



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City Engineer

BACKWATER VALVE

Standard
Detail

609

Revision Date
Nov, 2013

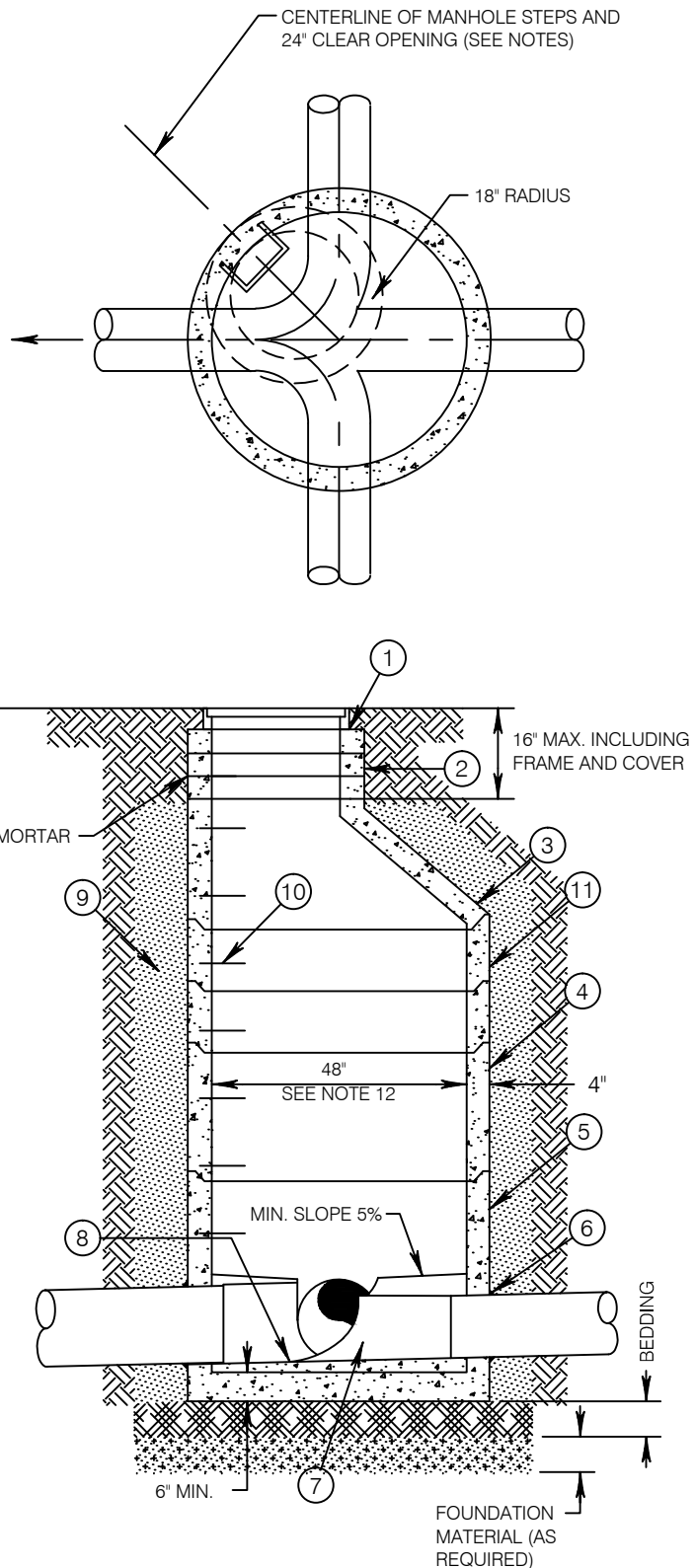
Revision Date
Dec, 2016

NOTES:

1. MANHOLE FRAME AND HINGED COVER SHALL BE A 24" PAMREX. WORDING ON COVER SHALL BE "SEWER" IN 2" RAISED LETTERS (OR APPROVED EQUAL).
2. MANHOLE SHOWN IS 48" INSIDE DIAMETER, 5" WALL THICKNESS. MAX. PIPE SIZE FOR THE 48" MANHOLE IS 21".
3. ALL HOLES FOR INLET AND OUTLET PIPE SHALL BE BLOCKED OUT WITHIN SECTIONS.
4. ALL MANHOLE JOINTS SHALL USE A CONFINED RUBBER GASKET MEETING ASTM C-443 SPECIFICATIONS.
5. ALL PIPE THROUGH MANHOLE WALL SHALL HAVE A "KOR-N-SEAL" BOOT OR EQUAL.
6. MANHOLE STEPS SHALL BE POLYPROPYLENE ENCAPSULATED EQUAL TO STD DETAIL 643.
7. BEDDING AND FOUNDATION MATERIAL REQ'D AS SHOWN ON DETAIL AND AS NOTED IN THE SPECIFICATIONS. WORDING ON COVER MAY BE USED IF APPROVED BY ENGINEER.
8. LOCATION OF MANHOLE STEPS SHALL NOT BE OVER FLOW LINES AND SHALL BE APPROVED BY THE CITY ENGINEER.
9. ALL RINGS AND SECTIONS TO BE GROUTED INSIDE AND OUT.
10. NO BRICKS OR WOOD ALLOWED TO RAISE MANHOLE.

DETAIL NOTES:

- 1 OLYMPIC FOUNDARY MH38 OR EAST JORDAN ERGO 001043L01 FRAME AND HINGED COVER.
- 2 4" MIN. TO 12" MAX. PRECAST CONCRETE RINGS. CAST WITH GROOVE SO THAT SAFETY STEP CAN BE FIELD INSTALLED.
- 3 PRECAST ECCENTRIC CONE 48" TO 24" FOR SHALLOW APPLICATIONS SEE DETAIL 625.
- 4 PRECAST SECTION 1', 2', 3' OR 4'.
- 5 PRECAST BASE 2', 3' OR 4'.
- 6 KOR-N-SEAL BOOT OR EQUAL.
- 7 FORM CHANNEL WITH CLASS "D" CONCRETE.
- 8 MIN. 0.10' TO MAX. 1.00' DROP BETWEEN INVERTS IN AND INVERTS OUT.
- 9 GRAVEL BORROW OR NATIVE MATERIAL SUBJECT TO ENGINEER APPROVAL.
- 10 POLYPROPYLENE PLASTIC STEP SEE STD DETAIL 643.
- 11 1' PRECAST SECTION REQUIRED BELOW CONE OR FLAT TOP.
- 12 MANHOLES BIGGER THAN 48" DIAMETER NEED SPECIAL APPROVAL



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PUBLIC WORKS DEPARTMENT

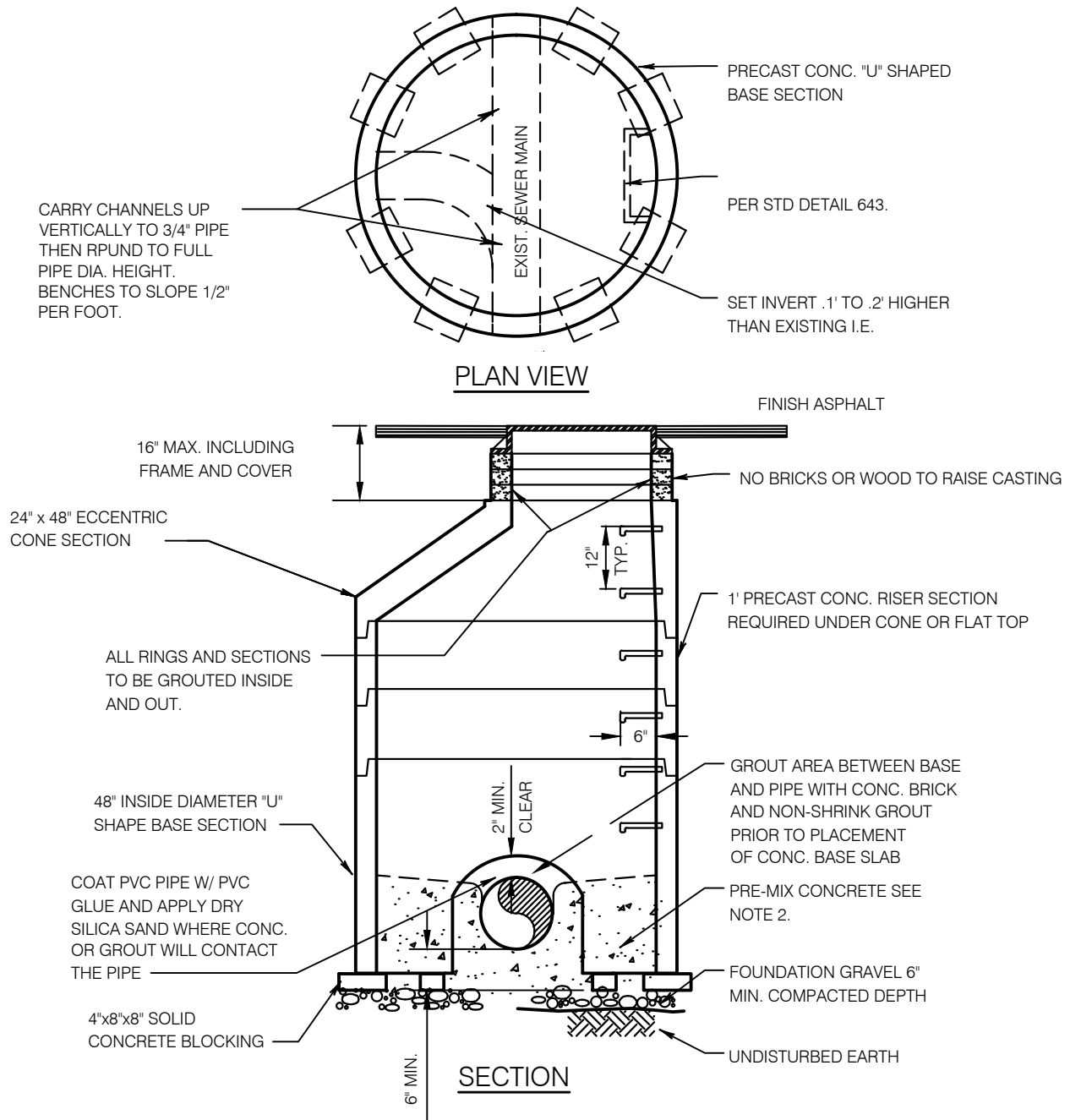
Approved By:
[Signature]
City Engineer

STANDARD
48" SANITARY
SEWER MANHOLE

Standard
Detail

621

Revision Date
Jun, 2015



NOTES:

1. ALL APPLICABLE DETAILS AND NOTES FROM STD DETAIL 621 (STANDARD PRECAST MH) APPLY TO SADDLE MH.
2. 3000 PSI PRE-MIX CONCRETE WITH AIR ENTRAINMENT SHALL BE PLACED FROM 6" (MIN.) UNDER SEWER MAIN TO FINISHED BENCH HEIGHT. CHANNELING SHALL BE COMPLETED AT TIME OF PLACEMENT. THIN OVERLAYED OF GROUT IN CHANNELS NOT ALLOWED.
3. TOP OF PIPE NOT TO BE CUT OUT UNTIL AUTHORIZED BY THE CITY ENGINEER.



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PUBLIC WORKS DEPARTMENT

Approved By:

City Engineer

SADDLE MANHOLE

Standard
Detail

622

Revision Date
Jun, 2015

1. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING PRIOR TO COMMENCEMENT OF WORK.
2. WORK WITHIN CITY, COUNTY OR STATE R.O.W. REQUIRES A PERMIT. ONCE THE PERMIT HAS BEEN ISSUED THE CONTRACTOR SHALL GIVE THREE WORKING DAYS NOTICE PRIOR TO BEGINNING OF WORK.
3. THE CITY SHALL BE NOTIFIED SEVEN DAYS IN ADVANCE OF CONNECTION TO THE EXISTING SYSTEM.
4. ALL REQUESTS FOR INSPECTIONS AND FOR WITNESSING TESTS SHALL BE SCHEDULED WITH THE CITY INSPECTOR A MINIMUM OF 24 HOURS IN ADVANCE.
5. CONTRACTOR SHALL EXCAVATE AROUND EXISTING MH'S TO PREVENT UNEQUAL SOIL LOADING DURING CONSTRUCTION.
6. EXISTING SEWER FLOWS SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO PROVIDE EQUIPMENT AND LABOR NECESSARY.
7. CONNECTIONS TO EXISTING MH'S SHALL BE CORED AND CONNECTION MADE WITH A KOR-N-SEAL BOOT OR APPROVED EQUAL.
8. CONTRACTOR SHALL INSTALL AN APPROVED MECHANICAL "T" HANDLE PLUG TO SEPARATE THE NEW CONSTRUCTION FROM THE EXISTING SEWER. PLUG EACH PIPE IF SEPARATION PLUG CANNOT BE INSTALLED IMMEDIATELY. ISOLATION PLUG SHALL BE SECURED TO THE LADDER.
9. ON EXISTING MH CONNECTIONS, THE CONE AND LADDER SHALL BE ROTATED TO THE CENTER OF THE WIDEST BENCH IF THE EXISTING LADDER IS WITHIN SIX INCHES OF THE PROPOSED INLET (AS DIRECTED BY THE CITY INSPECTOR). EXISTING LADDER RUNGS SHALL BE REMOVED. NEW RUNGS SHALL BE INSTALLED PER THE STD DETAIL 643.
10. MANHOLES SET IN PAVED STREET OR OTHER PAVED AREAS SHALL BE SET TO FINISH GRADE OR THE PAVING AND WHEN REQUIRED. THE MANHOLE FRAME SHALL BE TILTED TO CONFORM TO THE GRADE OF THE PAVED SURFACE. REMOVE ASPHALT FROM COVER AFTER PAVING. REPLACED THE BITIMINOUS COATING ON THE COVER, IF REMOVED, PER MANUFACTURES RECOMMENDATIONS.
11. MANHOLES SHALL BE WATERTIGHT. IN AREAS OF HIGH GROUND WATER, RISER SEAMS, PICK HOLES AND ADJUSTMENT RINGS SHALL BE SEALED WITH "WRAPID SEAL" by CANUSA-CPS OR APPROVED EQUAL.
12. PVC SEWER MAINS SHALL NOT HAVE A JOINT OR FITTING WITHIN 10' OF THE MANHOLE.
13. INSTALL TWO FOOT CONE ON MANHOLES EIGHT FEET AND UNDER IN HEIGHT. REDUCING SLAB ON SHALLOW MANHOLE TO BE REVIEWED BY CITY ENGINEER PRIOR TO ACCEPTANCE.
14. PIPE PENETRATIONS IN MH'S SHALL BE CORED. MIN. REQUIRED FALL FROM INLET TO OUTLET IS 0.1' ($\frac{5}{16}$ "/FT.). PROVIDE ADDITIONAL FALL FOR STEEPER RUNS. MATCH CROWN ELEV. OF SIDE SEWERS TO THE HIGHEST MAINLINE PENETRATION (AS A MINIMUM).
15. THE CITY EXPECTS A HIGH DEGREE OF QUALITY IN MH CHANNELING. CHANNEL WORK SHALL INITIALLY BE QUALIFIED IF DONE BY THE CONTRACTOR OR SUBCONTRACTOR THE CITY IS NOT FAMILIAR WITH.
16. IN SHALLOW MANHOLE APPLICATION IF REDUCING SLAB IS USED THEN THE TOP OPENING AND LADDER SHOULD BE CENTERED OVER THE INLET OR OUTLET PIPE.



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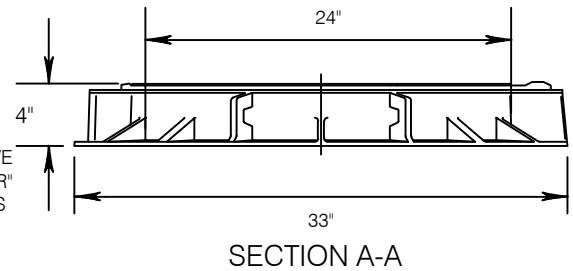
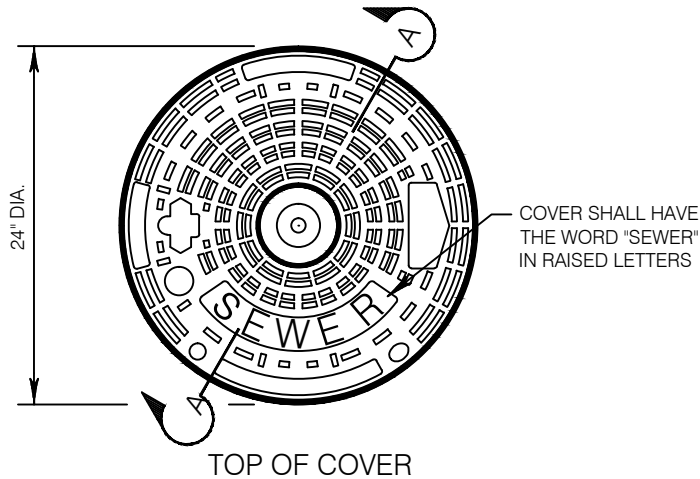
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 City Engineer

MH INSTALLATION AND CONNECTION NOTES

Standard
Detail

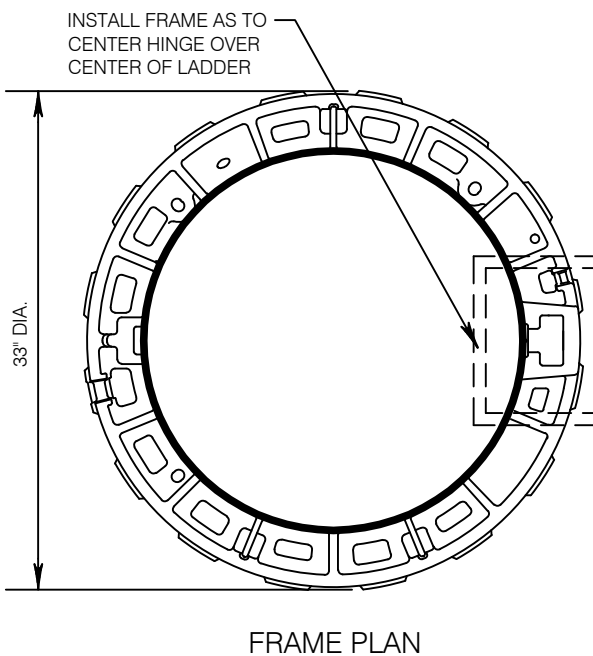
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Revision Date
Jun, 2015

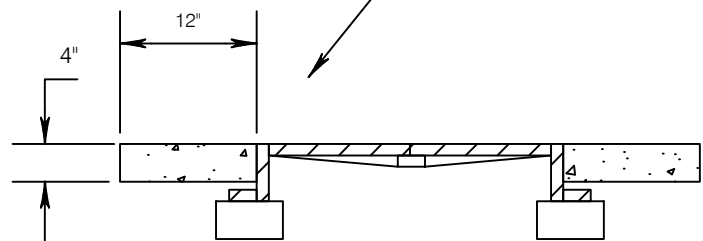


NOTES:

1. OLYMPIC FOUNDARY MH38 OR EAST JORDAN ERGO 001043L01 FRAME AND HINGED COVER.
2. COVER AND FRAME SHALL BE MANUFACTURED FROM DUCTILE IRON MEETS AASHTO H20 OR APPROVED EQUAL.
3. CITY OF BOTHELL LOGO NOT REQUIRED.
4. LID MUST BE COVERED WITH TAR PAPER BEFORE OVERLAY.
5. GASKET CAN BE REPLACED; USED ONLY ORIGINAL PAMREX GASKET, AVAILABLE THROUGH AUTHORIZED DEALERS.
6. VERIFY SLOTTED FRAMES ARE THOROUGHLY FILLED WITH MORTAR FOR EFFICIENT INTERACTION WITH IRON AND STRUCTURE.
7. VERIFY GASKET IS PROPERLY CLAMPED ON ITS FRAME GROOVE ALONG ITS ENTIRE LENGTH.
8. IF THE FRAME IS IN THE TRAVEL LANE, THE HINGE SIDE SHOULD OPEN UP TOWARDS TRAFFIC.



IN UNPAVED AREAS, OR AS SHOWN IN THE PLANS, PROVIDE A CONCRETE RING AROUND THE MANHOLE FRAME, 12" WIDE AND 4" THICK.



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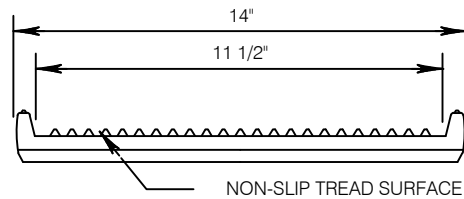
City Engineer

**LOCKING SEWER
MANHOLE COVER
AND FRAME**

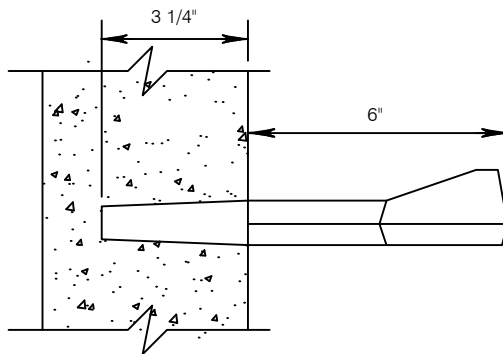
Standard
Detail

624

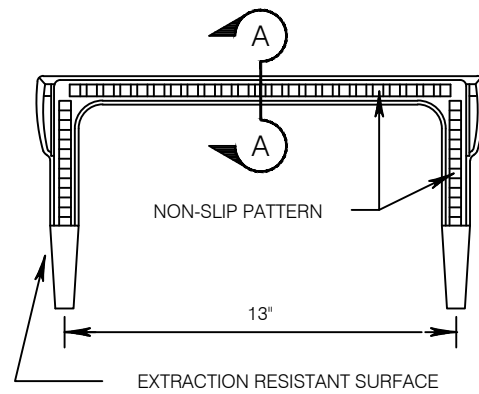
Revision Date
Jun, 2015



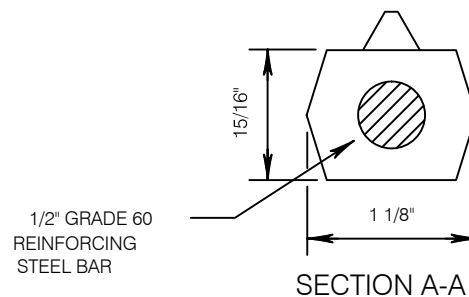
ELEVATION



SIDE ELEVATION



PLAN



SECTION A-A

NOTES:

1. STEPS SHALL BE STEEL REINFORCED COPOLYMER POLYPROPYLENE PLASTIC CONFORMING TO:
 - A) ASTM D 478 AND AASHTO M-199, EXCEPT THAT THE MINIMUM HORIZONTAL PULLOUT LOAD SHALL BE 1500 LBS.
 - B) ASTM A 615 GRADE 60 (DEFORMED REINFORCING STEEL BAR).
2. ONLY STEPS APPROVED BY THE ENGINEER SHALL BE USED.
3. ALL FABRICATION DIMENSIONS INDICATED ARE MINIMUM.
4. THE MINIMUM TOTAL CROSS-SECTIONAL AREA OF THE EXPOSED PORTION OF THE STEP, INCLUDING THE 1/2-INCH DEFORMED REINFORCING STEEL BAR, AND EXCLUDING THE NON-SLIP TREAD SURFACE, SHALL BE ONE SQUARE INCH.
5. THE ENTIRE POLYPROPYLENE PLASTIC MATERIAL SURROUNDING THE REINFORCING STEEL BAR SHALL BE CAST MONOLITHICALLY. MINIMUM COVER SHALL BE 3/16-INCH.
6. THE FOLLOWING DIMENSIONS SHALL APPLY UNLESS OTHERWISE NOTED ON THE DRAWINGS OR STANDARD PLANS FOR SPECIFIC STRUCTURES:

$D = 6" \pm 1/4"$, $E = 3 1/4" \pm 1/4"$
7. STEPS SHALL BE SPACED AT A MAXIMUM OF 12-INCHES.
8. STEPS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED MANUFACTURER'S RECOMMENDED PROCEDURE.



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Approved By:

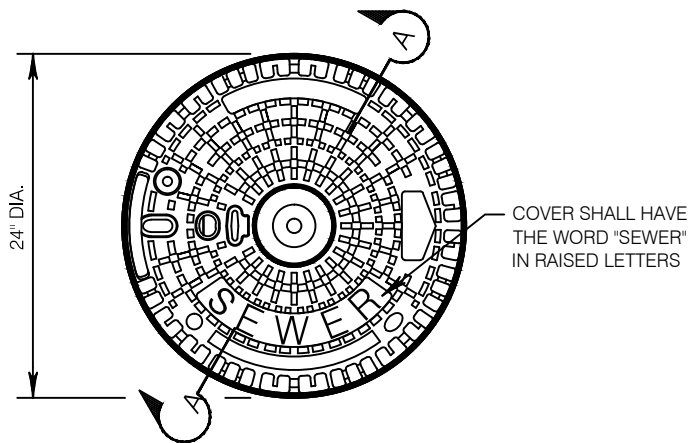
City Engineer

POLYPROPYLENE
PLASTIC STEPS

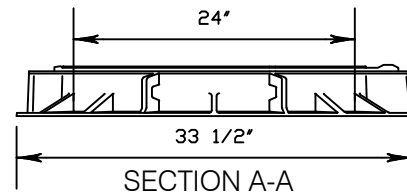
Standard
Detail

643

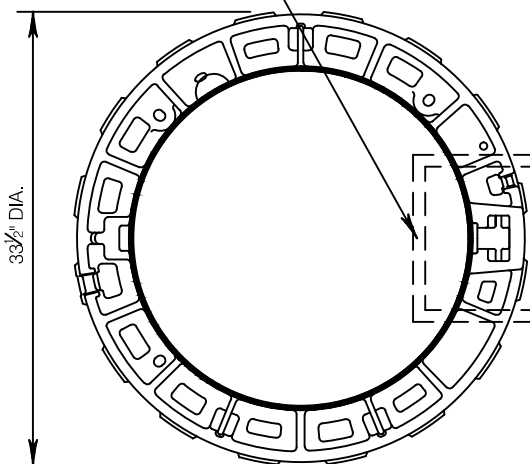
Revision Date
Feb, 2012



TOP OF COVER



INSTALL FRAME AS TO
CENTER HINGE OVER
CENTER OF LADDER



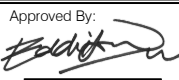
FRAME PLAN

NOTES:

1. MANHOLE COVER AND FRAME: PAMREX 24".



City of Bothell
PUBLIC WORKS DEPARTMENT

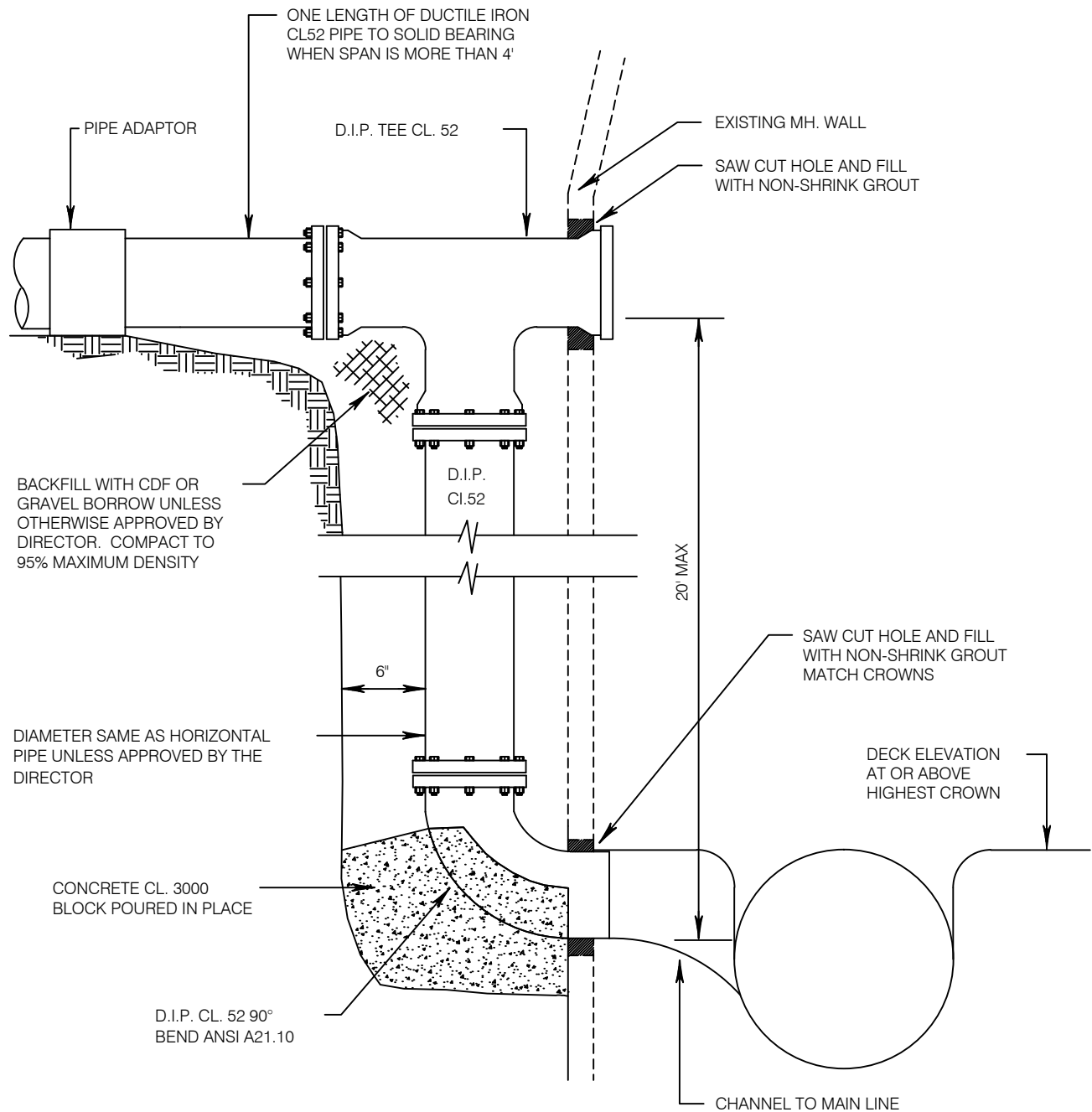
Approved By: 
City Engineer
Date: _____

**MANHOLE LOCKING
RING AND COVER**

Standard
Detail

645

Revision Date
Nov, 2013



DUCTILE IRON DROP CONNECTION

NOTE:

DROP MANHOLE WILL ONLY BE ALLOWED
IF APPROVED BY DIRECTOR.



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City of Bothell
PUBLIC WORKS DEPARTMENT

Approved By:

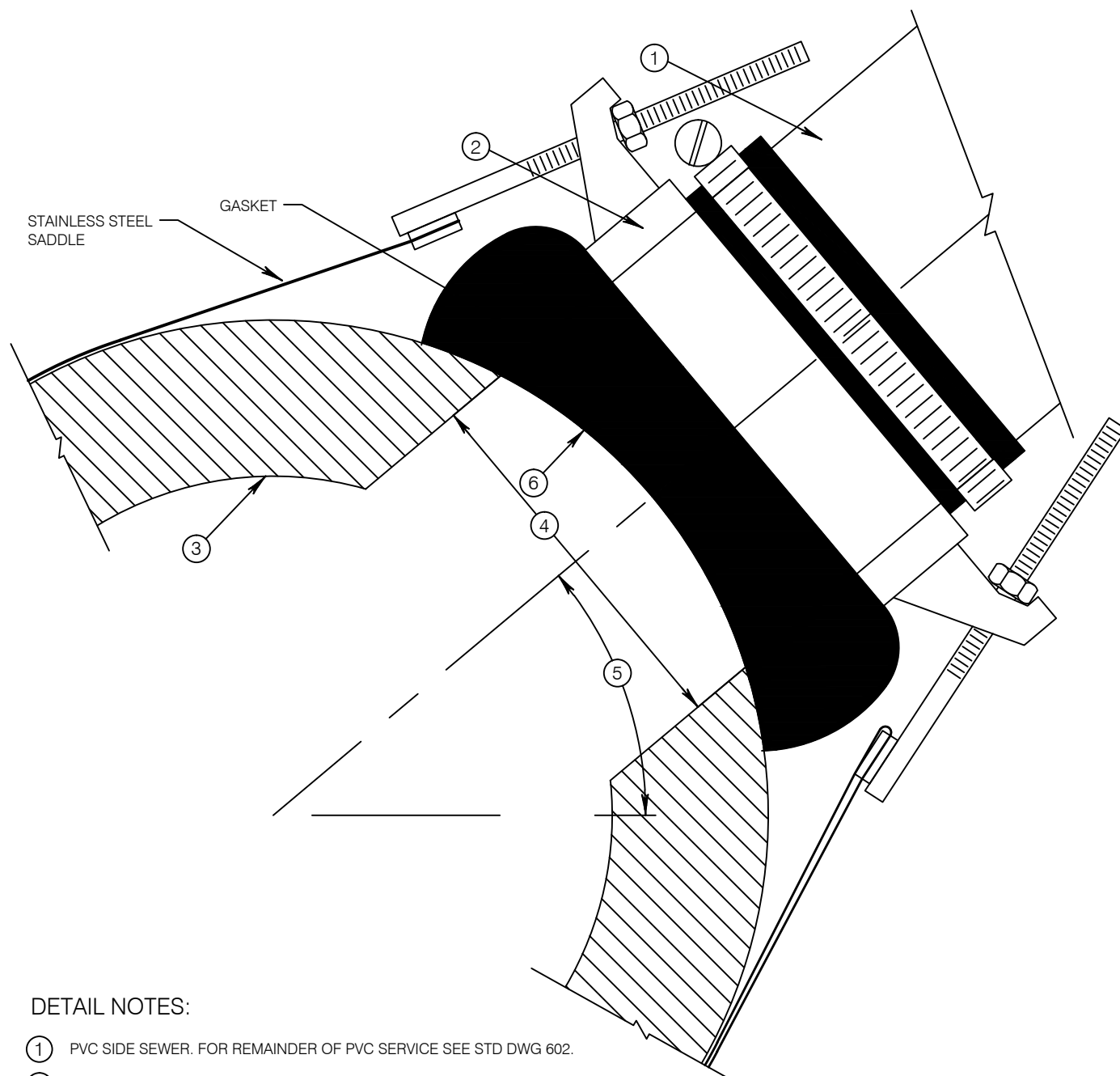
City Engineer

**OUTSIDE DROP
MANHOLE
CONNECTION**

Standard
Detail

647

Revision Date
Feb, 2012



DETAIL NOTES:

- ① PVC SIDE SEWER. FOR REMAINDER OF PVC SERVICE SEE STD DWG 602.
- ② ROMAC "CB" SEWER SADDLE OR APPROVED EQUAL.
- ③ EXISTING SANITARY SEWER MAIN.
- ④ CORE DRILL EXISTING MAINLINE PIPE PER MANUFACTURE'S SPECIFICATIONS.
- ⑤ 35° MIN., 45° MAX.
- ⑥ SIDE SEWER PIPE SHALL NOT ENTER (PROTRUDE) INTO SEWER MAIN.



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PUBLIC WORKS DEPARTMENT

Approved By:

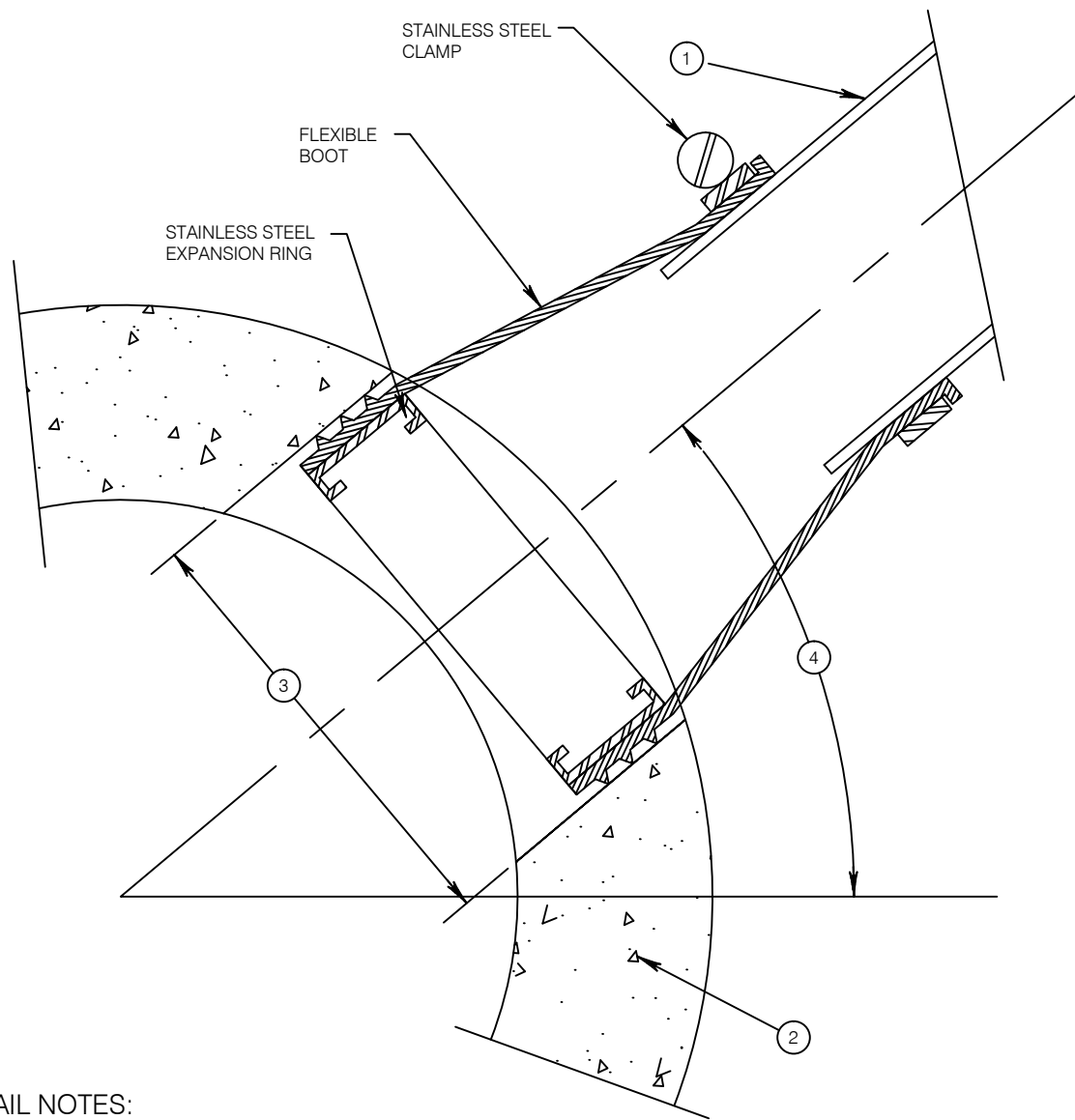
City Engineer

SEWER CONNECTION
TO EXISTING
SEWER MAINS

Standard
Detail

666

Revision Date
Feb, 2012



DETAIL NOTES:

- ① PVC SIDE SEWER. FOR REMAINDER OF PVC SERVICE SEE STD DWG 602.
- ② EXISTING OR NEW CONCRETE SANITARY SEWER MAIN.
- ③ CORE DRILL EXISTING MAINLINE PIPE PER MANUFACTURER'S SPECIFICATIONS.
- ④ 35° MIN, 45° MAX.

NOTES:

- 1. USE OF THIS SEWER CONNECTION ALTERNATE MUST HAVE APPROVAL OF THE DIRECTOR ON A CASE BY CASE BASIS.
- 2. HATCHED AREA: INSERT-A-TEE OR APPROVED EQUAL.



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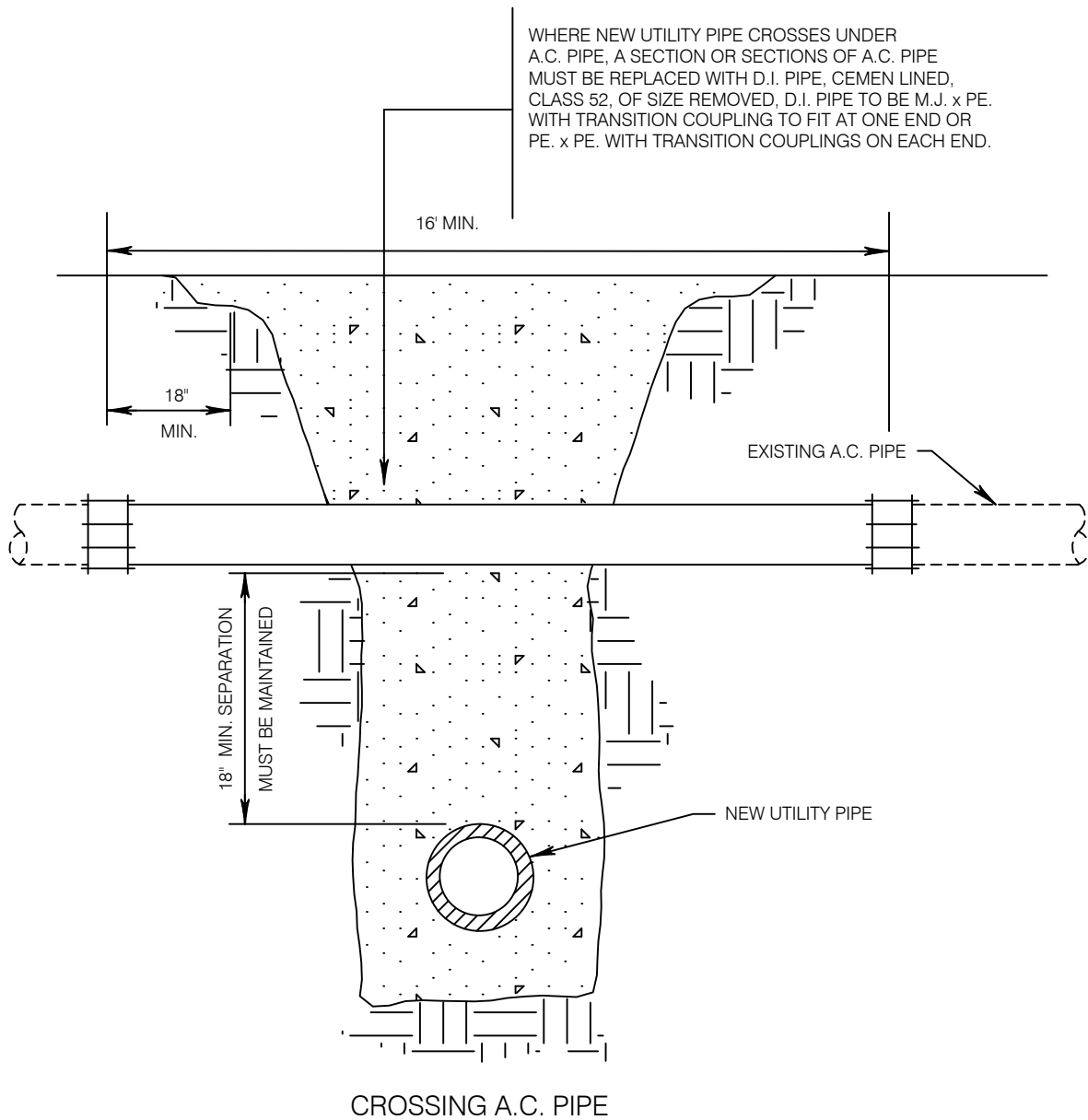
Approved By:
[Signature]
City Engineer

ALTERNATE
CONNECTION TO
EXISTING/NEW
SEWER MAINS

Standard
Detail

667

Revision Date
Feb, 2012



NOTE:

IF ASBESTOS CONCRETE (A.C.) PIPE IS TO BE SAWCUT OR IF THE A.C. PIPE IS TO BE REMOVED, ALL ENVIRONMENTAL PROTECTION AGENCY RULES, PUGET SOUND CLEAN AIR AGENCY REGULATIONS, AND LABOR AND INDUSTRY REQUIREMENTS MUST BE MET.



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Approved By:

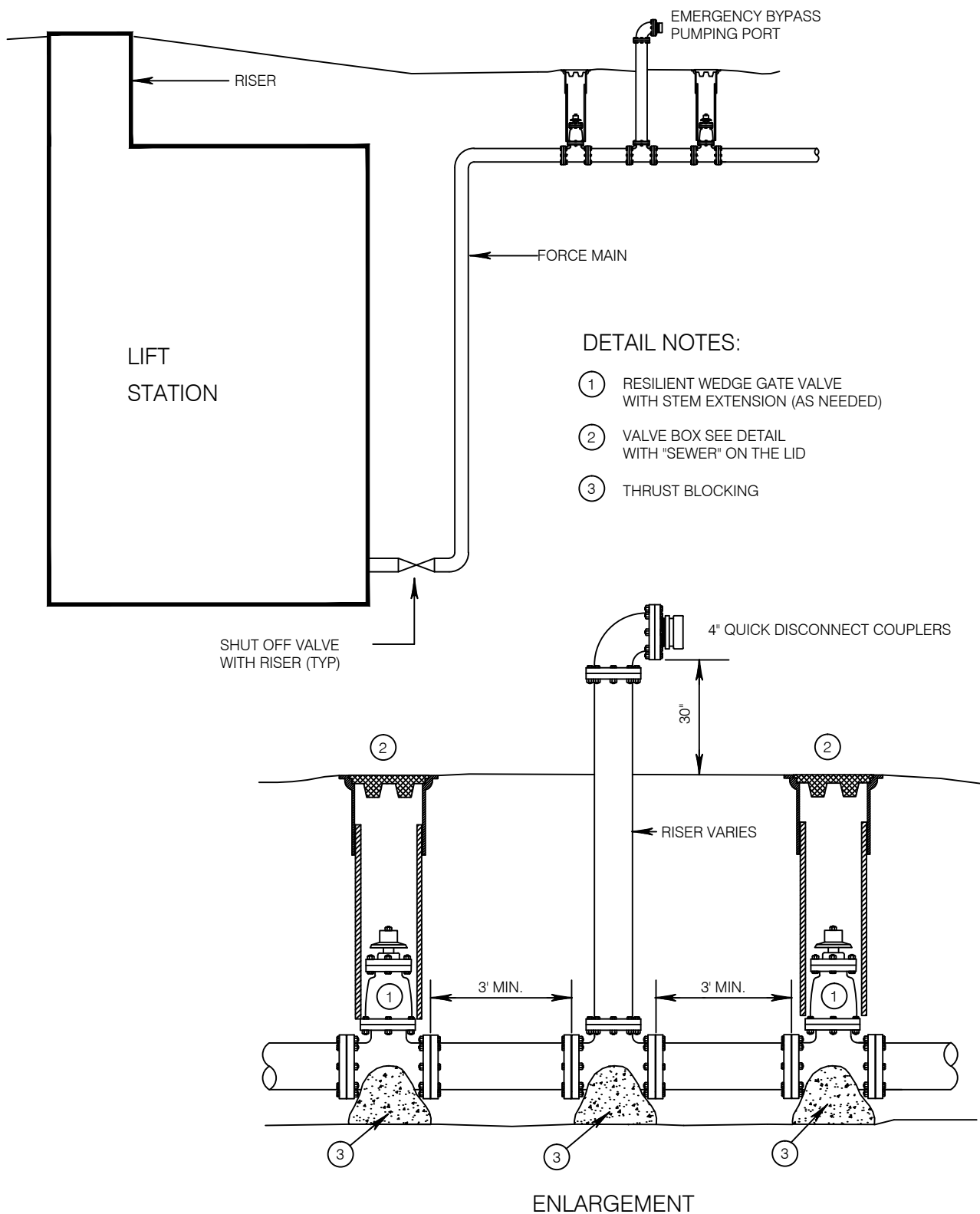
City Engineer

**CROSSING
ASBESTOS CONCRETE
PIPE**

Standard
Detail

672

Revision Date
Feb, 2012



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PUBLIC WORKS DEPARTMENT

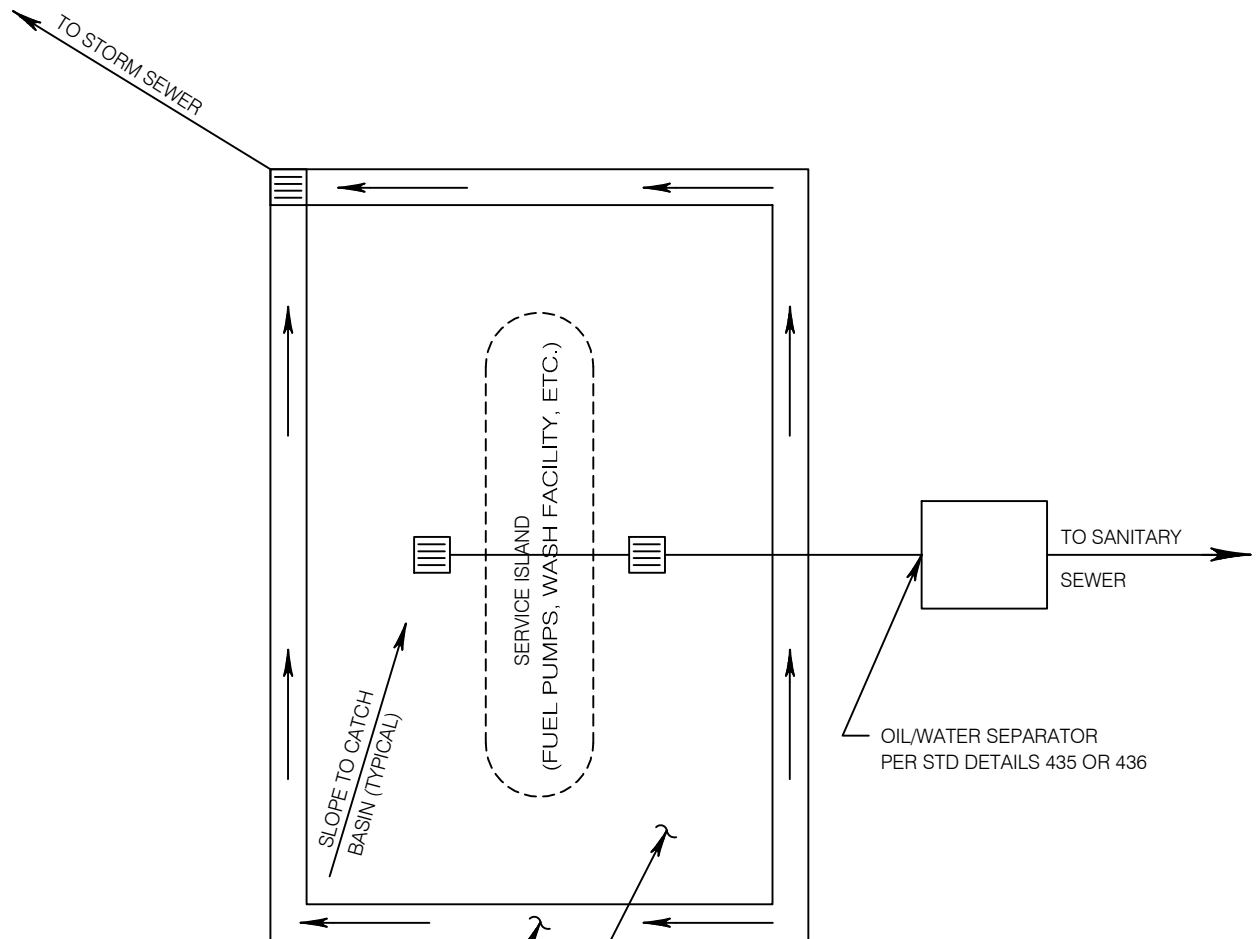
Approved By:
[Signature]
City Engineer

LIFT STATION
EMERGENCY
BYPASS PUMP PORT

Standard
Detail

676

Revision Date
Feb, 2012



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PUBLIC WORKS DEPARTMENT

Approved By:

[Signature]
City Engineer

UNCOVERED PAVED VEHICLE SERVICE AREA DRAINAGE

Standard
Detail

690

Revision Date
Feb, 2012